U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

NRCS–ENG–364
02–85

SOIL MECHANICS TESTING FACILITY
SPECIFIC GRAVITY WORK SHEET

	Temperature T_x, Deg. C _____	Weight in Grams	Pycnometer Number _____	Laboratory Sample Number _____
1	Pycnometer 1/3 full of water plus soil			
2	Pycnometer 1/3 full of water		$G_s = \frac{W \times F^*}{W_2 + W - W_1} = \frac{(\quad ③ \quad) \times (\quad F \quad)}{(\quad ⑦ \quad)}$	
3	Soil, (W) = (1) – (2)			
4	Pycnometer full of water at T_x, (W_2)			
5	$W_2 + W$ = (4) + (3)			
6	Pycnometer full of water plus soil at T_x, (W_1)		G_s = _____ =	
7	$W_2 + W - W_1$ = (5) – (6)			

	Temperature T_x, Deg. C _____	Weight in Grams	Pycnometer Number _____	Laboratory Sample Number _____
1	Pycnometer 1/3 full of water plus soil			
2	Pycnometer 1/3 full of water		$G_s = \frac{W \times F}{W_2 + W - W_1} = \frac{(\quad) \times (\quad)}{(\quad)}$	
3	Soil, (W) = (1) – (2)			
4	Pycnometer full of water at T_x, (W_2)			
5	$W_2 + W$ = (4) + (3)			
6	Pycnometer full of water plus soil at T_x, (W_1)		G_s = _____ =	
7	$W_2 + W - W_1$ = (5) – (6)			

	Temperature T_x, Deg. C _____	Weight in Grams	Pycnometer Number _____	Laboratory Sample Number _____
1	Pycnometer 1/3 full of water plus soil			
2	Pycnometer 1/3 full of water		$G_s = \frac{W \times F}{W_2 + W - W_1} = \frac{(\quad) \times (\quad)}{(\quad)}$	
3	Soil, (W) = (1) – (2)			
4	Pycnometer full of water at T_x, (W_2)			
5	$W_2 + W$ = (4) + (3)			
6	Pycnometer full of water plus soil at T_x, (W_1)		G_s = _____ =	
7	$W_2 + W - W_1$ = (5) – (6)			

*Ratio of density of water at test temperature, T_x, to the density of water at 20° C.

Completed by _____ Date _____ Checked by _____ Date _____

Computed by _____ Date _____ Recorded by _____ Date _____